

Application No.: 10/795,967

Amendments to the Claims:

Please cancel Claims 3-6, 9, 12, 15, 18 and 21.

The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing:

1. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells comprising the step of contacting the cells with an anthocyanin-rich extract from in an amount effective to inhibit the growth and cell cycle progression of the carcinoma cells without effecting the growth and cell cycle progression of normal cells wherein the anthocyanin extract is derived from chokeberries.
2. (Original) The method of claim 1, wherein the carcinoma cells are colon carcinoma cells.
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells comprising contacting the carcinoma cells with an anthocyanin-rich extract in an amount effective to up regulate the gene expression of p21<sup>WAF1</sup> and p27<sup>KIP1</sup> in carcinoma cells without effecting p21<sup>WAF1</sup> and p27<sup>KIP1</sup> gene expression in normal cells wherein the anthocyanin extract is derived from chokeberries.
8. (Original) The method of claim 7, wherein the carcinoma cells are colon carcinoma cells.

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9. (Cancelled)
10. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells comprising contacting the carcinoma cells with an anthocyanin-rich extract in an amount effective to cause dual blockage of cell cycle progression at both the G<sub>1</sub>/G<sub>0</sub> and G2/M phases of the cell cycle without effecting the cell cycle progression in normal cells wherein the anthocyanin extract is derived from chokeberries.
11. (Original) The method of claim 10, wherein the carcinoma cells are colon carcinoma cells.
12. (Cancelled)
13. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells comprising contacting the carcinoma cells with an anthocyanin-rich extract in an amount effective to down regulate the gene expression of cyclin A and cyclin B1 without effecting the gene expression of cyclin A and cyclin B1 in normal cells wherein the anthocyanin extract is derived from chokeberries.
14. (Original) The method of claim 13, wherein the carcinoma cells are colon carcinoma cells.
15. (Cancelled)
16. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells comprising contacting the carcinoma cells with an anthocyanin-rich extract in an amount effective to up regulate the gene expression of p21<sup>WAF1</sup> and p27<sup>KIP1</sup> and down regulate gene expression of cyclin A and cyclin

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B1 in carcinoma cells, without effecting the gene expression of p21<sup>WAF1</sup> and p27<sup>KIP1</sup> cyclin A and cyclin B1 in normal cells wherein the anthocyanin extract is derived from chokeberries.

17. (Original) The method of claim 16, wherein the carcinoma cells are cancer carcinoma cells.
18. (Cancelled)
19. (Currently Amended) A method of inhibiting the growth and cell cycle progression of carcinoma cells in a patient comprising administering to a patient a therapeutically effective amount of an anthocyanin-rich extract effective to inhibit the growth and cell cycle progression of carcinoma cells without effecting the growth and cell cycle progression of normal cells in the patient wherein the anthocyanin extract is derived from chokeberries.
20. (Original) The method of claim 19, wherein the carcinoma cells are colon carcinoma cells.
21. (Cancelled)
22. (Currently Amended) A method of inhibiting the growth and cell cycle progression of colon carcinoma cells in a patient comprising administering to a patient a therapeutically effective amount of an anthocyanin-rich extract derived from chokeberries capable of causing dual blockage of cell cycle progression at both the G<sub>1</sub>/G<sub>0</sub> and G<sub>2</sub>/M phases of the cell cycle without effecting the cell cycle progression in normal cells wherein the anthocyanin extract is derived from chokeberries.
23. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an anthocyanin-rich extract capable of inhibiting the

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- growth and cell cycle progression of carcinoma cells in a patient without effecting the growth and cell cycle progression of normal cells in the patient.
24. (Withdrawn) The pharmaceutical composition of claim 23, wherein the anthocyanin-rich extract is derived from chokeberries, bilberries, grapes or combinations thereof.
25. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an anthocyanin-rich extract capable of causing dual blockage of cell cycle progression at both the G<sub>1</sub>/G<sub>0</sub> and G<sub>2</sub>/M phases of the cell cycle in a patient without effecting the cell cycle progression in normal cells in the patient.
26. (Withdrawn) The pharmaceutical composition of claim 25, wherein the anthocyanin-rich extract is derived from chokeberries, grapes, billiberies or combinations thereof.
27. (Withdrawn) The pharmaceutical composition of claim 25, wherein the anthocyanin-rich extract is derived from chokeberries.